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Detection of erroneous sequences by nonlinear signature analyzer

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Abstract

The notion of optimal signature analyzer for the testing of given binary sequence is introduced. The analyzer is designed via initial sequence and is nonlinear. The model of errors is such that initial sequence can be replaced by any other. Proposed nonlinear analyzer has essentially better performances in comparison with linear signature analyzer. The testing with the help of the analyzer has several peculiarities. Particularly, in some cases the length of testing sequence is decreased.